

**REMARKS**

Claims 1-11, 13, 15, 16 and 21-32 are pending in the present Application. Claims 1, 24, and 28-31 have been amended, no claims have been canceled, and Claim 33 has been added, leaving Claims 1-11, 13, 15, 16 and 21-33 for consideration upon entry of the present Amendment. A Request for Continuing Amendment under 37 C.F.R. § 1.114 accompanies this Amendment.

Claims 1, 24, 28, and 30 have been amended to recite that the electrical component is an electrical conduction winding, stator bar, or a stator piece for an electrical device, and that the electrical device is an electrical motor or generator. Support for this amendment can be found at least in the present Application as filed, pp. 2-3, ¶ [0014]. In addition, Claim 30 has been amended to recite specific mineral fillers. Support for this amendment to Claim 30 can be found in Claim 31, and Claim 31 has been amended to remove the portions of Claim 31 that are now included in Claim 30.

Claim 28 has been amended to positively recite the mineral fillers therein, and Claim 29 has been amended to positively recite a mineral filler comprising a mica including muscovite and phlogopite.

Claim 33 has been added to further define the claimed invention. Support for this claim can be found at least in the present Application as filed on p. 12, ¶ [0041].

No new matter has been introduced by these amendments and by the new claims. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

**Claim Rejections Under 35 U.S.C. § 102(a), (b), (e)**

Claims 1, 3, 4, 9, 13, 15, 16, and 21-32 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by United States Patent No. 6,849,926 to Park et al., hereafter "Park". Applicants respectfully traverse this rejection.

Park teaches a composite containing nano magnetic particles. The composite includes nano magnetic particles in a dielectric matrix. The matrix is made of an inorganic material such as silica, alumina, or hydrosilsesquioxane, or an organic

material such as polyimide, polymethyl methacrylate, or methylsilsesquioxane. The nano magnetic particles consist of  $\text{Fe}_2\text{O}_3$ , chromium oxide, europium oxide, NiZn-ferrite, MnZn-ferrite, yttrium-iron garnet, or indium (In) (Park, abstract.)

Claims 1 and 24 of the Application are directed respectively to an article and a method of manufacturing the article. The article comprises a nanosized filler consisting essentially of particles having the formula (II)  $(\text{MeO})_x(\text{Fe}_2\text{O}_3)_{100-x}$  (Claim 1, 24.)

Applicants respectfully assert that independent claims 1 and 24 as currently amended are patentable over Park because Park does not teach each and every limitations of claims 1 and 24. To anticipate a claim under 35 U.S.C. § 102, a single source must contain all of the elements of the claim. *Lewmar Marine Inc. v. Barient, Inc.*, 827 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1007 (1988).

Park teaches a semiconductor device including a semiconductor substrate, and an insulator made of a composite having a dielectric matrix, and nano magnetic particles contained in the matrix (Park, column 2, lines 46-50.) Claims 1 and 24 as currently amended recite an article comprising an electric component wherein the electric component is part of an electrical device including a motor and a generator. See, for example, present Application as filed, paragraphs [0001], [0002], and [0014], wherein the electric component is a motor, a generator, or the like. Park does not teach an article comprising an electric component that is part of an electrical device including a motor and a generator.

Thus, Park does not anticipate independent claims 1 and 24, and consequently dependent claims 3-11, 13, 15-16, 21-23, and 25-27.

Regarding claims 28-29, independent Claim 28 is directed to an article comprising an electrical component and an electrically insulating layer disposed upon the electrical component. The electrically insulating layer comprises a thermosetting polymer and a nanosized filler comprising mineral fillers including asbestos, ground glass, kaolin, silica, calcium silicate, calcium carbonate, magnesium oxide, zinc oxide, aluminum silicate, calcium sulfate, magnesium carbonate, sodium silicate, barium carbonate, barium sulfate, mica, talc, alumina trihydrate, quartz, wollastonite or a

combination comprising at least one of the foregoing mineral fillers; and wherein the nanosized filler is used in an amount of 0.01 to 30 wt% based on the total weight of the insulating layer.

Claim 28 as currently amended recites an article comprising an electric component wherein the electric component is part of an electrical device including a motor and a generator. Park fails to teach or disclose this. Further, Park is silent regarding mineral fillers comprising the micas of Claim 29. Thus, Park does not anticipate Claims 28-29.

Regarding claims 30-32, independent claim 30 has been amended to recite an article comprising an electric component wherein the electrical component is part of an electrical device including a motor and a generator. As similarly discussed above for Claims 1, 24 and 28, Park does not disclose this element and does not anticipate Claims 30-32 in light of the amendment to Claim 30.

Thus, in view of the above remarks, Applicants respectfully assert that Park does not anticipate Claims 1, 3-11, 13, 15-16, and 21-32. Withdrawal of the rejection and allowance of the claims are respectfully requested.

Claims 28-31 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by United States Patent No. 4,390,596 to Laurent et al., hereafter "Laurent". Applicants respectfully traverse this rejection.

Laurent teaches an active or passive electronic component encapsulated within a bis-imido polymer composition (Laurent, abstract.) Laurent further teaches mineral fillers of fine particle size such as particles of mica, talk, calcium hydrosilicate of the Wollastonite type, calcium carbonate (calcite) and magnesium carbonate (dolomite), alumina, hydrated alumina, kaolin or silica, or alternatively glass microbeads or also asbestos fibers or glass fibers (Laurent, paragraph bridging Cols. 8-9.)

As currently amended, independent Claims 28 and 30 as currently amended recite an article comprising an electric component wherein the electric component is part of an electrical device including a motor and a generator. Since Laurent does not teach these electrical components, Laurent does not anticipate Claims 28-31.

Thus, withdrawal of the rejection and allowance of the claims is respectfully requested.

Claims 30-31 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by United States Patent No. 4,493,873 to Keane, et al. (Keane). Applicants respectfully traverse this rejection.

Keane teaches a corona-resistant wire enamel composition comprising a polyimide, polyamide, polyester, polyamideimide, polyesterimide, or polyetherimide resin and from about 1% to about 35% by weight of dispersed alumina particles of a finite size less than about 0.1 micron (Keane, abstract.) The alumina used in Keane is fumed alumina. Col. 3, lines 38-41. Keane discloses the use of the corona-resistant coating for wires for use in a motor coil. Col. 4, lines 55-60. Keane specifically teaches that the use of fumed alumina is advantageous in that it can be used to decrease the coil size and include a greater quantity of copper in the same coil size. Col. 4, lines 55-58.

As currently amended, independent Claim 30 recites oxide fillers and/or carbides generally, but does not recite alumina, and specifically does not recite fumed alumina as disclosed and specifically taught in Keane. Further, Keane is silent as to the use of other fillers, and provides specific teachings that limit to the use of fumed alumina. Since Keane does not teach the other oxide fillers, carbide fillers, or combinations of these, and in addition fails to teach combinations of fillers with the alumina fillers disclosed in Keane, Keane cannot therefore anticipate Claims 30-31. Thus, withdrawal of the rejection and allowance of the claims is respectfully requested.

Claims 28-31 stand rejected under 35 U.S.C. § 102(a) or (e), as allegedly anticipated by United States Patent No. 6,783,828 to Fujimaru, et al. (Fujimaru). Applicants respectfully traverse this rejection.

Fujimaru teaches a resin composition having a phase separation structure having at least two phases and inorganic particles having a mean primary particle size of 0.1  $\mu\text{m}$  or less (Fujimaru, abstract.)

As currently amended, independent Claims 28 and 30 as currently amended recite an article comprising an electric component wherein the electric component is part of an electrical device including a motor and a generator. Since Fujimaru does not teach these electrical components, Fujimaru does not anticipate Claims 28-31.

Thus, withdrawal of the rejection and allowance of the claims is respectfully requested.

Claims 28-31 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by JP 2002064276A to Masahiko et al., hereafter “Masahiko”. Applicants respectfully traverse this rejection.

Masahiko teaches a photosetting or thermosetting resin composition for forming a resin insulating layer in a printed wiring board including 0.01 to 5 weight % of inorganic filler, such as silica sol whose average particle diameter is 5 nm to 0.5  $\mu$ m with respect to 100 weight % of resin forming component including an optical or thermal polymer unsaturated compound (Masahiko, abstract, English translation.)

As currently amended, independent Claims 28 and 30 as currently amended recite an article comprising an electric component wherein the electric component is part of an electrical device including a motor and a generator. Since Masahiko does not teach these electrical components, Masahiko does not anticipate Claims 28-31.

Thus, withdrawal of the rejection and allowance of the claims is respectfully requested.

#### Claim Rejections Under 35 U.S.C. § 102(e)/103(a)

Claims 1, 3-9, 13, 15, 24, and 27-31 stand rejected under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over United States Patent No. 6,869,683 to Sakurai et al., hereafter “Sakurai”. Applicants respectfully traverse this rejection.

Sakurai teaches an electromagnetic wave (EM) absorber constructed by integrally laminating an EM-absorbing layer having an EM-absorbing filler dispersed in a silicone resin on at least one surface of an EM-reflecting layer having an

electrically conductive filler dispersed in a silicone resin (Sakurai, abstract.)

Regarding the 102 rejection over Sakurai

Applicants respectfully assert that independent Claims 1, 24, 28, and 30 as currently amended are not anticipated by Sakurai for at least the following reasons. Independent Claims 1, 24, 28, and 30 require that the nanosized filler has an average largest dimension of less than or equal to about 200 nanometers. Sakurai, however, teaches that the electromagnetic wave absorbing filler should preferably have a mean particle size of about 0.1  $\mu\text{m}$  to about 100  $\mu\text{m}$ , the equivalent of about 100 to about 100,000 nanometers. Sakurai, in fact, teaches that the preferred size of the particles is especially about 1  $\mu\text{m}$  to about 50  $\mu\text{m}$ , the equivalent of about 1,000 to about 50,000 nanometers (Sakurai, column 7, lines 26-35.) This size is substantially larger than the nanosized filler recited in independent claims 1, 24, 28, and 30 by Applicants.

Further, independent Claims 1, 24, and 30 recite that the article comprises an electrical component, wherein the electrical component is part of an electrical device including a motor and a generator. This electrical component is not taught by Sakurai, which instead teaches applications to preventing scatter and ghost images in television and radar applications. Sakurai further teaches that the EM-absorbing layer is laminated on an EM reflecting layer (Sakurai, abstract.) The EM reflecting layer is not an electric component that is part of an electrical device such as the electrical conduction winding, stator bar, or a stator piece for an electrical motor or generator as recited in amended Claims 1, 24, 28, and 30 by Applicants.

For at least the above reasons, Sakurai does not anticipate independent claims 1, 24, 28, and 30, and consequently, dependent claims 3-9, 13, 15, 27, 29, and 31. Withdrawal of the rejection is respectfully requested.

Regarding the 103 rejection over Sakurai

The Examiner states

Alternatively, one skilled in the art at the time of the invention would have been motivated to utilize any of the EM wave absorbing filler materials taught by Sakurai et al at a particle size of 100 nm and an amount as low as 5% by volume utilizing any commercially available

ferrite material or silicone resin which would obviously result in a weight percent that would fall within the claimed range

(3/29/2007 Office Action, page 7, first paragraph.) Applicants respectfully submit that obviousness cannot be based on what the skilled person in the art might try or find obvious to try. Rather, the proper test requires determining what the prior art would have led the skilled person to do. The requirement for a determination of obviousness is that "both the suggestion and the expectation of success must be founded in the prior art, not in applicant's disclosure" (emphasis added). *In re Dow Chem.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988). Applicants respectfully assert that Sakurai does not teach or suggest the use of nanosized fillers having largest average dimension less than 200 nm as recited by Applicants. In fact, a skilled artisan would be discouraged by Sakurai to use particles of this dimension as Sakura explicitly states

particles with a particle size of less than 0.1  $\mu\text{m}$  have too large a specific surface area, probably failing to achieve a high packing density

(Sakurai, column 7, lines 29-30.) Thus it would not have been obvious for a skilled artisan to use filler particles as claimed by Applicants.

For at least this reason, Applicants respectfully assert that Claims 1, 3-9, 13, 15, 24, and 27-31 are not unpatentable over Sakurai under 35 U.S.C. § 103(a). Reconsideration and withdrawal of this rejection are respectfully requested.

#### Further Claim Rejections Under 35 U.S.C. § 103

Claims 10, 16, 25, 26, and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakurai.

In light of the amendments to independent Claims 1, 24, 28, 30, and 32, and in view of the foregoing remarks, Applicants respectfully submit that the obviousness rejections to claims 10, 16, 25, 26, and 32 over Sakurai is moot. Reconsideration and withdrawal of the rejection is respectfully requested.

Park

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Park et al. Applicants respectfully traverse this rejection.

Applicants respectfully submit that Claim 2 depends from Claim 1, and thus this rejection will be addressed in relation to Claim 1. Applicants respectfully assert that independent claim 1 is patentable over Park under 35 U.S.C. § 103(a) because Park does not teach nor suggest all the limitation of independent claim 1 as currently amended, specifically Park does not teach nor suggest that the electrical component is part of an electrical device including a motor and a generator. This electrical component is further defined to comprise copper (Claim 2), and to be selected from a stator bar and an electrical winding (Claim 1.)

Thus, Applicants respectfully assert that Claim 2 is not unpatentable over Park, and respectfully request reconsideration and withdrawal of the rejection, and allowance of the claim.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and withdrawal of the objection(s) and rejection(s) and allowance of the case are respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 07-0868.

Respectfully submitted,

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